

ABSTRACT OF THE DISCLOSURE

[0094] A substantially enriched mammalian hematopoietic cell population is provided, which is characterized as a progenitor cell committed to the megakaryocyte lineage. Methods are provided for the isolation and culture of these cells. The cell enrichment methods employ reagents that specifically recognize CD9 and CD41, in conjunction with other markers expressed on lineage committed progenitor cells. These cells give rise exclusively to megakaryocytes and platelets, as evidenced by their growth and differentiation *in vitro* and *in vivo*.